

IN THE CLAIMS

- 1 (Currently Amended). A cellular transceiver comprising:
a first digital decimation filter with N bands; and
a second digital decimation filter to reject N-1 bands coupled to said first digital decimation filter ~~for implementing~~ adapted to implement a Global System for Mobile communication mode.
- 2 (Original). The transceiver of claim 1 wherein said first digital decimation filter may selectively implement a digital square-root-raised-cosine filter for a Wideband Code Division Multiple Access mode.
- 3 (Original). The transceiver of claim 2 when said first digital decimation filter and said second digital decimation filter are programmable tap filters.
- 4 (Original). The transceiver of claim 2 including a controller that selectively programs said first digital decimation filter to provide an output for a Wideband Code Division Multiple Access mode.
- 5 (Original). The transceiver of claim 4 wherein said first digital decimation filter is coupled to a controller that is programmable to cause said first digital decimation filter to output N bands for a Global System for Mobile communication mode.
- 6 (Original). The transceiver of claim 4 wherein said first digital decimation filter and said second digital decimation filter provide an output for a transceiver receiving a Global System for Mobile communication signal and said first digital decimation filter provides an output when the system is receiving a Wideband Code Division Multiple Access signal.
- 7 (Original). The transceiver of claim 6 wherein said first digital decimation filter is programmable to have either twenty-one or fifty-three taps.

8 (Original). The transceiver of claim 7 wherein said second digital decimation filter has twenty-seven taps.

9 (Original). The transceiver of claim 1 including a memory that provides less than all of the coefficients from said first filter to said second filter.

10 (Original). The transceiver of claim 8 wherein said memory provides less than all of the coefficients from said first digital decimation filter to said second digital decimation filter.

11 (Original). The transceiver of claim 1 wherein the output from said first digital decimation filter and the output from said second digital decimation filter are coupled to a multiplexer, the output of said multiplexer being selectively controllable depending on the nature of the cellular system.

12 (Previously Presented). The transceiver of claim 11 wherein the output of said multiplexer depends on whether the transceiver is utilized in a Global System for Mobile communication or a Wideband Code Division Multiple Access system.

13 (Original). The transceiver of claim 12 wherein said controller selects the output of the first digital decimation filter when the transceiver is located in a Wideband Code Division Multiple Access system and selects the output of the second digital decimation filter when the transceiver is in a Global System for Mobile communication system.

14 (Original). The transceiver of claim 13 wherein the output from said second digital decimation filter is a result of filtering by said first digital decimation filter and said second digital decimation filter.

15 (Original). The transceiver of claim 12 using the same anti-alias analog filter and analog-to-digital converter for both modes.

16 (Previously Presented). A method of receiving cellular signals comprising:
providing a first filtering stage and a second filtering stage;
selectively programming said first stage to filter a Wideband Code Division Multiple Access signal or a Global System for Mobile communication signal;
using said second stage to filter the Global System for Mobile communication signal;
detecting the type of signal that has been received;
adapting said first and second stages to the type of the detected signal; and
selectively using said first and second stages based on the type of the detected signal.

17 (Original). The method of claim 16 including selectively setting the number of taps in said first stage to provide a square-root-raised-cosine filter for a Wideband Code Division Multiple Access mode.

18 (Original). The method of claim 16 including using said first stage to filter N bands and said second stage to reject $N-1$ bands.

19 (Canceled).

20 (Previously Presented). The method of claim 16 including selectively filtering said input signal depending on whether the input signal is for a Global System for Mobile communications mode or a Wideband Code Division Multiple Access mode.

21 (Original). The method of claim 16 including providing less than all of the coefficients from said first stage to said second stage.

22 (Original). The method of claim 16 including using the same anti-alias analog filter and analog-to-digital converter for both the Wideband Code Division Multiple Access and Global System for Mobile communication modes.

23 (Original). The method of claim 17 including setting the number of taps depending on the type of signal received.

24 (Original). The method of claim 23 including setting the number of taps in said first stage to 21 when a Wideband Code Division Multiple Access signal is received.

25 (Original). The method of claim 24 including setting the number of taps in said first stage to 53 when a Global System for Mobile communication signal is received.

26 (Original). An article comprising a medium for storing instructions that cause a processor-based system to:

selectively set the number of taps in a first filtering stage depending on whether a Wideband Code Division Multiple Access signal or a Global System for Mobile communication signal has been detected; and

select an output from either a first of two filtering stages or a second of two filtering stages depending on whether a Wideband Code Division Multiple Access or a Global System for Mobile communication signal is received.

27 (Original). The article of claim 26 further storing instructions that cause a processor-based system to control a multiplexer to select the output of said first or said second filtering stage as the output from said filtering stages.

28 (Original). The article of claim 26 further storing instructions that cause a processor-based system to provide less than all of the coefficients from said first stage to said second stage when a Global System for Mobile communication signal is being received.

29 (Original). The article of claim 28 further storing instructions that cause a processor-based system to set the number of taps in said first filtering stage at twenty-one when a Wideband Code Division Multiple access signal is received and at fifty-three when a Global System for Mobile communication signal is received.

30 (Original). The article of claim 29 further storing instructions that cause a processor-based system to store the coefficients from said first stage before passing them to said second stage when a Global System for Mobile communication signal is being received.